

yet. On a former occasion I stated to you my belief that the key to our more general meteorological changes and conditions of the earth's surface would eventually be found in the variations of the condition of the sun, and if one may be allowed to draw a broad inference from the facts I have brought under your notice, it would in some degree go to support this belief. Such rapid strides have of late years been made in our knowledge of solar physics, and in the means of observing every state and change of our luminary, that if the relations suggested really do exist, we may reasonably hope that at no very remote period they may be traced out from their intricate involvement.

ART. XX.—*On a New Form of Spectroscope.*

By R. L. J. ELLERY, ESQ.

[Read 12th March, 1871.]

This was an oral description of a new form of a *seven prism Spectroscope* which was exhibited to the meeting. The instrument in its general construction did not materially differ from other large spectroscopes. The new feature was the method adopted for adjustment of the prisms to minimum deviation, which could be accomplished by simply pointing the observing telescope to any desired part of the spectrum; and it was so arranged that any number of prisms, from one to seven, could be used and adjusted by the mechanism.

The accompanying diagram will fully explain the arrangement, $p^1 p^2 p^3 p^4 p^5 p^6 p^7$ are the prisms attached to the link work jointed at $abcdefg$. The first prism is pivoted to the table at the point F , and to the last prism is attached a right-angled piece RA , pivoted at the joint h . By moving the arm A of the right-angled piece, the whole series of prisms is moved, the link work expanding or contracting by the slotted radial arms, moving over the centre pin C , which again travels in the slot SS in the table. It will readily be seen, therefore, that all the parts being properly gauged and made, the whole series of prisms will be moved symmetrically by moving the arm A , which is rigidly fixed to the observing telescope, and it follows that by pointing the telescope to any desired part of the spectrum, the prisms will all move proportionally, and

PRISM PLATE OF NEW FORM OF SPECTROSCOPE

